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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/711,302	11/14/2000	Hong Jo Jeong	2950-0176P	6861
2292	7590	08/27/2004	<div>EXAMINER</div> <div>CHU, KIM KWOK</div>	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			<div>ART UNIT</div> <div>2653</div>	<div>PAPER NUMBER</div>
DATE MAILED: 08/27/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/711,302	<b>Applicant(s)</b> JEONG ET AL.	
	<b>Examiner</b> Kim-Kwok CHU	<b>Art Unit</b> 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 6/28/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-8,12,14,15 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-8,12,14,15 and 19-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Remarks***

1. Applicant's Remarks filed on June 28, 2004 have been fully considered but they are not persuasive.

(a) Applicant states that the prior art of Satoh does not disclose "judging the existence of the optical disk in the optical disk drive" (page 9 of the Remarks, lines 5 and 6). Accordingly, the prior art of Satoh discloses a method which determines the type of optical disk presented in the disk drive. In other words, Satoh teaches the existence of the optical disk such as a DVD-RAM or a DVD-ROM in the optical disk drive (Figs. 7 and 8);

(b) Applicant states that Satoh merely assumes that an optical disk is present (page 9 of the Remarks, lines 7 and 8). Accordingly, the prior art of Satoh does not assume there is a DVD-RAM or DVD-ROM exist in the optical drive. Since the existence of a DVD-ROM or DVD-RAM in the optical drive is not known, the prior art of Satoh teaches a judging method to determine the existence of the above DVD disks;

(c) Applicant does not agree the objection of the amended term "initializes a sum value". Applicant states that the sum value is the result of any previously conducted steps S4 and S5 (page 7 of the Remarks, line 1) and to initializes a sum value means refreshes the sum value (page 7 of the Remarks, lines 1 and 2). Accordingly, the term "sum value" does not refer to the

sampling of FE signal as describe in Applicant's step S4; and

(d) with respect to the unclear term "summing the values of the sampled focus error signals" in claims 5, line 7, Applicant states that this term is clear as discussed on page 7 of the specification, lines 16-26 (page 7 of the Remarks, lines 12 and 13). Accordingly, lines 24-26 of page 7 of the specification might be an error. Contrary to the statement in lines 24 and 25, the sum of the sampled focus error is likely to exceed the level (summing all the sampled noise within a time interval). However, instead of using the term "sum", the "peak" of the sampled focus error is not likely to exceed the level (sampled focus error is noise).

***Specification***

2. The disclosure is objected to because of the following informalities:

(a) in the Amendment filed on June 23, 2003, on page 6, lines 8 and 9, the term "initializes a sum value" does not refer to any kind of value to be added. For example, to sum the signals detected by the photodetector; and

(b) as a consequence, in Fig. 5, the term "initialize a sum value" in step S2 should be corrected accordingly.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5-8, 12, 14, 15 and 19-24, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) in claim 5, line 7, the term "summing the values of the sampled focus error signal" is not clear because the focus error signal is already a summed signal. On the other hand, the

specification discloses that "the microcomputer adds the digitized focus error to the sum value ....." (page 6 of Amendment, last two lines). Applicant should clarify how the focus error signal is summed;

(b) similarly, in claim 20, line 6, the term "summing the values of the sampled focus error signal" is not clear. Applicant should clarify how the focus error signal is summed; and

(c) in claim 22, the term "analog-to-digital converting starts to sample the focus error signal performed ....." is not clear because it does not read right.

5. The claims not specifically mentioned above are indefinite based upon their dependence on a rejected claim.

**Claim Rejections - 35 USC § 102**

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

7. Claims 5, 6, 8, 14, 15 and 20-23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Satoh et al. (U.S. Patent 5,903,531).

Satoh teaches a method for checking the existence of an optical disk in a disk drive having all of the steps as recited in claims 5, 6, 8, 14 and 15. For example, Satoh teaches the following steps:

- (a) as in claim 5, receiving a focus error signal (Fig. 5);
- (b) as in claim 5, sampling the received focus error signal at constant intervals (Figs. 3 and 5; all received signal are sampled/synchronized with clock signals from the system controlling means 100);
- (c) as in claim 5, summing the values of the sampled focus error signal, which are less than a first predetermined reference level (Figs. 7 and 8; the summed focus error signal is less than a predetermined reference level such as the S-letter level in Fig. 4);



(d) as in claim 5, determining whether the summed value is greater than a predetermined judging level (Figs. 7 and 8; Step A5 or A10);

(e) as in claim 5, judging the existence of the optical disk in the disk drive based on the result in the determining step (Figs. 7 and 8; step A5 or A10);

(f) as in claim 6, the step (b) is started when the value of the focus error signal exceeds the first predetermined reference level, while moving an optical pickup (Figs. 7 and 8; S letter level is the first predetermined reference level);

(g) as in claim 8, in the judging step (e), an optical disk is judged to exist if the summed value of the focus error signal is greater than the predetermined judging level (Figs. 7 and 8; step A7 or A12);

(h) as in claim 14, step (b) is performed if a focus OK signal is asserted (Figs. 7 and 8; step A2); and

(i) as in claim 15, the focus OK signal is asserted based on a result of comparing a beam strength signal and a reference signal (Figs. 7 and 8, step A2; focus OK signal is obtained when the S letter level is determined).

8. Claims 20-23 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Satoh further shows:

(a) as in claim 20, an analog-to digital converter for sampling the focus error signal at constant intervals (Fig. 5; focus error is a summing signal; the summing circuit 23 is an A/D conversion device so that detected analog signals are digitized and then summed); and

(b) as in claim 22, the analog-to-digital converter starts to sample the focus error signal if a focus OK signal is asserted (step A2; focus OK signal is obtained when the S letter level is determined and then the summed focus error signal is obtained).

#### ***Allowable Subject Matter***

9. Claims 7, 12, 19 and 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 7, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

(a) the predefined reference level includes

first and second predetermined reference levels; the first predetermined reference level is for starting the sampling step (b) and the second predefined reference level is for sampling the focus error.

As in claims 19 and 24, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

(a) a focus error value is added to the summed value if the error value is greater than the predetermined reference level.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

**10. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action.

In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.  
20231 Or faxed to:

(703) 872-9306 (for formal communications intended for  
entry. Or:

(703) 746-6909, (for informal or draft communications,  
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park  
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor  
(Receptionist).

Any inquiry of a general nature or relating to the status of  
this application should be directed to the Group receptionist  
whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to Kim CHU  
whose telephone number is (703) 305-3032 between 9:30 am to 6:00  
pm, Monday to Friday.

*KE 8/18/04*

Kim-Kwok CHU  
Examiner AU2653  
August 18, 2004

(703) 305-3032